

U.S. NUCLEAR REGULATORY COMMISSION OBSERVATION REPORT NO. OAR-05-03,
"OBSERVATION OF U.S. DEPARTMENT OF ENERGY, OFFICE OF QUALITY ASSURANCE
ANNUAL NAVAL NUCLEAR PROPULSION PROGRAM QUALITY ASSURANCE PROGRAM
REVIEW AT BETTIS ATOMIC POWER LABORATORY ON APRIL 27-28, 2005"

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Enclosure

1.0 INTRODUCTION

On April 27-28, 2005, staff from the U.S. Nuclear Regulatory Commission (NRC) Division of High-Level Waste Repository Safety observed two meetings between the U.S. Department of Energy (DOE), Office of Quality Assurance (OQA) and the Naval Nuclear Propulsion Program (NNPP). OQA/NNPP conducted the April 27-28, 2005, meetings at the Bettis Atomic Power Laboratory (Bettis) facilities located in West Mifflin, Pennsylvania.

During the first meeting, held on April 27, 2005, OQA reviewed NNPP QA Program activities for technical work associated with the Yucca Mountain Repository License Application (LA). During the second meeting, held on April 28, 2005, OQA performed an annual review of the NNPP quality assurance (QA) program activities for 2004. The NRC observers assessed the effectiveness of the OQA assessment team members and the process they followed in determining the effectiveness of NNPP's QA program implementation.

2.0 MANAGEMENT SUMMARY

On April 27-28, 2005, OQA conducted the first part of a three-part process for assessing the NNPP QA program implementation. The scope of the OQA activities includes:

- A. In this first part of the assessment process, OQA and NNPP held an annual interface and exchange of information meeting to evaluate the implementation of the NNPP QA program implementation and any changes NNPP made in 2004.
- B. In the second part of the assessment process, OQA will perform and document an annual evaluation of the NNPP QA program, including reviewing audit and evaluation reports and changes to implementing procedures to ensure that the NNPP QA program controls are being effectively implemented and continue to meet DOE Quality Assurance Requirements and Description (QARD), DOE/RW-0333P, requirements.
- C. In the third part of the assessment process, OQA will observe selective NNPP QA activities (e.g., audits, evaluations, and design reviews) performed by the NNPP or its prime contractors.

OQA conducts this three-part assessment to provide necessary information for OQA to establish and maintain a high degree of confidence that NNPP and its contractors are meeting the QA requirements of the QARD. This observation report focuses on the first of the three parts of the OQA assessment process.

NNPP presented to OQA a review of NNPP QA program activities for 2004 for the technical work associated with NNPP's input to the LA. OQA staff determined that the QA program activities and outcomes described by NNPP appeared to meet the requirements of the QARD at this point in the assessment process. OQA will perform the second and third parts of the assessment process in the coming months to make its final conclusion of the effectiveness of the NNPP QA program implementation.

The NRC observers determined that OQA performed the first part of the assessment effectively, and the OQA staff demonstrated sound knowledge of the applicable QA program requirements and implementing procedures. The NRC observers agreed with the OQA conclusions and findings.

3.0 AUDIT PARTICIPANTS

OQA Staff

R. Dennis Brown
Robert Capshaw
Robert Scott

NRC Observers

Thomas Matula
Jack Parrott

4.0 REVIEW OF THE ASSESSMENT AND ASSESSED ORGANIZATION

OQA conducted the assessment using the following DOE, Office of Civilian Radioactive Waste Management (OCRWM) Administrative Procedures (APs), Line Procedures (LPs), and documents:

- LP-18.7Q-OCRWM, "OQA Activities For Assessing the NNPP QA Program"
- AP-16.1Q, "Condition Reporting and Resolution"
- AP-17.1Q, "Records Management"
- LP-18.4Q-OCRWM, "Audit Personnel Qualification"
- "Memorandum of Agreement for Acceptance of Naval Spent Nuclear Fuel, April 11, 2000".

The NRC observers followed NRC Manual Chapter 2410, "Conduct of Observation Audits," July 12, 2000, while observing the OQA assessment.

4.1 Scope of the Assessment

OQA and NNPP held an annual interface and exchange of information meeting to evaluate the implementation of the NNPP QA program implementation and any changes NNPP made in 2004. The objectives of the meeting were to:

- A. Review application of the NNPP QA program to the work performed for the NNPP Technical Support Document which will be part of the LA.
- B. Review details of the system controls, checks, and reviews implemented for the development of the Technical Support Document and its underlying analysis documents.
- C. Confirm that NNPP QA practices for the Technical Support Document and its underlying analyses meets the requirements of the QARD.

OQA will use the results of its assessment of this part of the three-part oversight process to establish a high degree of confidence that NNPP and its contractors are meeting the QA requirements of the DOE QARD, DOE/RW-0333P.

4.2 Conduct and Timing of the Assessment

The NRC observers determined that OQA performed the assessment effectively and the assessment team demonstrated sound knowledge of the applicable implementing procedures and QA program requirements. OQA assesses the NNPP QA activities annually to maintain the necessary confidence in the effectiveness of the NNPP QA program in meeting the QARD requirements.

4.3 Assessment Team Qualifications and Independence

The NRC observers reviewed the qualifications for the OQA assessment team members and determined that they were qualified and independent of the areas reviewed.

4.4 Assessment of Quality Assurance Activities

During the first meeting, held on April 27, 2005, OQA reviewed NNPP QA Program activities for technical work associated with the LA. NNPP and Bettis personnel presented information including the following:

- A. NNPP's statutory responsibilities for Naval Spent Nuclear Fuel, including NNPP's roles and responsibilities regarding the LA.
- B. DOE and NNPP QA roles and responsibilities per the Memorandum of Agreement.
- C. NNPP QA requirements governing prime contractor analysis work for the LA.
- D. Roles and responsibilities for QA of analysis at various levels within the NNPP.
- E. Bettis QA plan for the LA and supporting analysis reports.
- F. Role of Bettis QA in review and oversight related to the LA.
- G. Role of Bettis independent safety committee in QA of the LA.
- H. Naval Reactors field office oversight actions of Bettis technical work.

During the second meeting, held on April 28, 2005, OQA performed an annual review of the NNPP QA program activities for 2004. NNPP and Bettis personnel presented information including the following:

- A. Recent NNPP QA activities, including QA interactions with OCRWM related to Naval spent nuclear fuel disposal.
- B. A summary of changes to the NNPP QA program during 2004.
- C. Applicability of revisions to governing federal regulations.
- D. NNPP oversight activities and QA issues identified during 2004, including action to resolve the issues.
- E. Upcoming opportunities for OCRWM observations of NNPP QA activities in 2005.
- F. Actions to follow-up and verify the effectiveness of efforts to resolve other NNPP QA issues.

4.5 DOE Future Assessment Activities

DOE staff determined that the QA program activities and outcomes described by NNPP during this first part of the assessment process appeared to meet the requirements of the QARD. In

the coming months, OQA will perform the second and third part of the annual NNPP QA program implementation assessment process. In the second part of the assessment process, OQA will evaluate documentation supporting NNPP QA activities and, in the third part of the assessment process, OQA will observe certain NNPP QA activities. The results of the three oversight activities will provide necessary information for OQA to establish a high degree of confidence that NNPP and its contractors are meeting the QA requirements of the QARD.

5.0 NRC OBSERVER FINDINGS

The NRC observers determined that the OQA performed the first part of the assessment effectively, and the OQA staff demonstrated sound knowledge of the applicable QA program requirements and implementing procedures. The NRC observers agreed with the OQA conclusions and findings.